Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1. (currently amended): A control method for compensating changes in an SRS-Induced Power Exchange when connecting channels into, and disconnecting channels from, a continuous optical data transmission path of a WDM system, the method comprising the steps of:

providing at least two control units which operate at different speeds to influence tilting of a spectrum of data signals in the optical data transmission path;

measuring a change in overall power in the optical data transmission path via at least one quicker control unit of the at least two control units, the quicker control unit being connected to at least one filling light source for pumping a transmission fiber, the wavelength of the at least one filling light source lies within a transmission useable wavelength band;

compensating the tilting quickly by changing a the power of the at least one filling light source, then returning the power of the at least one filling light source slowly in the direction of the original state according to a tilt compensation mechanism using at least one slower operating control unit of the at least two control units.

Claim 2 (previously presented): A control method for compensating changes in an SRS-Induced Power Exchange as claimed in Claim 1, the method further comprising the step of:

incorporating a time delay in the signal in the optical data transmission path between measurement of the overall power and injection of the at least one filling light source.

Claim 3. (original): A control method for compensating changes in an SRS-Induced Power Exchange as claimed in Claim 1, the method further comprising the steps of:

Providing a controllable filter, wherein the influencing of the tilting of the spectrum is additionally performed by the controllable filter.

Claim 4. (original): A control method for compensating changes in an SRS-Induced Power Exchange as claimed in Claim 1, further comprising:

Power-controlled EDFA, wherein the influencing of the tilting of the spectrum is at least additionally performed by the power-controlled EDFA.

Claim 5. (cancelled)

Claim 6. (previously presented): A control method for compensating changes in an SRS-Induced Power Exchange as claimed in Claim 1, wherein the at least one injected filled light source is injected at a start of the optical data transmission path.

Claim 7. (previously presented): A control method for compensating changes in an SRS-Induced Power Exchange as claimed in Claim 1, wherein the at least one injected filled light source is injected at an end of the optical data transmission path and counter to a direction of transmission.

Claim 8. (currently amended): A optical data transmission path having a WDM system with a plurality of data transmission channels of different frequencies, comprising:

at least one multiplexer, arranged at a beginning of the optical data transmission path, for combining the data transmission channels;

a demultiplexer, arranged at an end of the optical data transmission path, for separating the data transmission channels; and

at least one path section arranged between the at least one multiplexer and the demultiplexer for determining and compensating spectral tilting of transmitted data signals, the at least one path section including (1) parts for measuring a change in overall power in the optical data transmission path via at least one quicker control unit of the at least two control units, the quicker control unit being connected to at least one filling light source for pumping a transmission fiber, wherein the wavelength of the at least one filling light source lies within a transmission useable wavelength band, and (2) parts for compensating the tilting quickly by

changing ~~a~~ the power of the at least one filling light source, then returning the power of the at least one filling light source slowly in the direction of the original state according to a tilt compensation mechanism using at least one slower operating control unit of the at least two control units~~a part for measuring an overall intensity of the transmitted data signals, at least one controlled filled light source for injecting light power into the at least one path section, and a part for controlling power of the filled light source to compensate power fluctuations of the overall intensity of the transmitted data signals,~~

~~wherein all of the parts of the at least one path section are provided as quick operation control elements for quickly determining and compensating for spectral tilting~~.

Claim 9. (previously presented) An optical data transmission path as claimed in Claim 8, wherein both the part for measuring the overall intensity of the transmitted data signals and the at least one controlled filled light source are arranged at a beginning of the at least one path section.

Claim 10. (previously presented): An optical data transmission path as claimed in Claim 8, further comprising:

a delay element provided between the part for measuring the overall intensity of the transmitted data signals and the at least one controlled filled light source.

Claim 11. (original): An optical data transmission path as claimed in Claim 10, wherein the delay element is selected from the group consisting of a dispersion-compensating fiber, a fiber with low dispersion, and a fiber doped with a rare earth element.

Claim 12. (cancelled)

Claim 13. (currently amended): An optical data transmission path as claimed in Claim 8, wherein ~~a frequency of the at least one controlled filled light source lies within a transmitted waive length band of the transmitted data signals, and~~ the at least one controlled filled light source has a ~~signal~~ single frequency.

Claim 14. (original): An optical data transmission path as claimed in Claim 8, wherein the at least one path section includes frequency-dependent filters which can be controlled in the at least one path section for compensating the tilting.

Claim 15. (original): An optical data transmission path as claimed in Claim 8, wherein the at least one path section includes power-controlled EDFA for compensating the tilting.

Claim 16. (original): An optical data transmission path as claimed in Claim 8, wherein the at least one path section includes at least one element, which is one of a filter and an amplifier, with a respective frequency-dependent transmission characteristic and a game characteristic, as well as downstream overall intensity meters, including an evaluation unit for determining the tilting.

Claim 17. (previously presented): A control method for compensating changes in an SRS-Induced Power Exchange as claimed in Claim 1, wherein the at least one slower control unit comprises a slow EDFA control unit connected to at least one pump source of a doped fiber.

Claim 18. (previously presented): An optical data transmission path as claimed in Claim 8, the at least one path section includes a slow power-controlled EDFA connected to at least one pump source of a doped fiber.